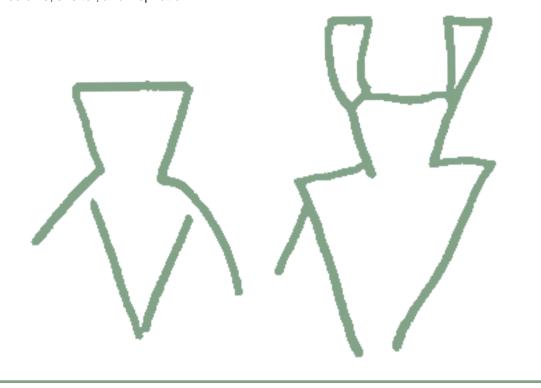


PIECING TOGETHER THE PAST

The greatest challenge to studying past peoples is that there is no one here to tell us their stories, to speak their languages, to dance their dances for us, or to share their world view. All we have are artifacts that have been uncovered thousands of years later. Archaeologists, making assumptions from these artifacts, piece together the lives of ancient peoples. We can look at a spear point and assume the people hunted; we can uncover building foundations and map the layout of their communities; we can even determine what plants were used for food and what materials were made into clothing. But this only gives us a glimpse of the lives of past peoples. Take away our language and stories and look only at our "artifacts". What would a toaster or pair of jeans uncovered thousands of years from now say about us?

THE DESERT ARCHAIC PEOPLES

By putting together small pieces of the prehistoric puzzle, archaeologists have created a picture of the first people of the Great Basin. Artifacts that have been uncovered include projectile points (spearheads used in hunting), manos and metates (similar to mortars and pestles) and basket fragments. We call these peoples the Desert Archaic, a sub-group of the Western Archaic who inhabited western North America from 12,000 BC to 400 AD. Most likely they came to the Great Basin 10,000 years ago, or perhaps even earlier. They came on foot, traveling in family bands, following the large game animals. Migrating into the Great Basin region over time, they learned the plants and the landscape intimately as they came. They were nomadic hunter-gatherers, traveling with the seasons and following their food supply. They harvested grass seeds, tubers, nuts, and fruits. They hunted small and big game. The climate was cooler and wetter then, as the most recent ice age was just ending. The land was rich with plants and animals, providing all that was needed for food, medicine, shelter, and inspiration.





THE FREMONT

From 400 BC to 1300 AD the nomadic pattern of Great Basin peoples was interrupted. For this 900-year period, the region was populated by horticulturists living in small villages or on scattered farmsteads. We call these people the Fremont, and they ranged from the western Colorado Plateau to the eastern Great Basin. No one knows exactly where the Fremont came from – some argue that they developed from Western Archaic hunter-gatherers, while others believe they came from the Ancestral Puebloan tribes to the south. The Fremont were adaptable people, even taking up hunting and gathering when it suited their needs. Artifacts found from one Fremont site to the next are diverse, exemplifying their flexibility, but four characteristic artifact types are found throughout the Fremont region: a distinctive style of basketry, grayware pottery, a particular style of moccasin, and trapezoidal art figures.

There is no evidence of the Fremont living in the Great Basin beyond 1300 -1350 AD. Theories explaining their departure from the region are varied. Some archaeologists believe that drought forced the Fremont into hunting and gathering and they eventually developed into the Numic speaking Shoshone, Ute, and Paiute tribes. Other archaeologists argue that the Numic speaking tribes came into the Great Basin from the west, pushing the Fremont to the Midwest plains. Still others say that because the Fremont varied so much throughout their region that they could not have all shared the same fate.

HISTORIC TRIBES OF THE GREAT BASIN

The tribal peoples now living in the Great Basin are descendents of the people who have been in the region for several hundred to several thousand years. When early explorers first entered the Great Basin, they encountered many different groups. And although there were several distinct tribes speaking various (but closely related) languages, the basic lifestyle was similar across the region.

The native people of the Great Basin knew the land intimately and understood the natural cycles. Small family groups hunted and gathered, patterning their lives to take advantage of the diverse and abundant resources. The land provided all their nutritional needs as well as materials for clothing and shelter. They hunted small and large animals, such as jackrabbits, antelope, and waterfowl; gathered pine nuts and berries; and dug roots and tubers. Enough food was harvested every summer and fall to carry them through the winters. Where the geography and climate allowed it, some also fished and farmed small plots. These were resilient, flexible, and adaptable people.

Explorers and settlers who encountered the Great Basin tribes focused on their lack of material goods and labeled them destitute, primitive, and savage. But the native people had lived off the land successfully for hundreds, even thousands, of years. Material goods would hinder their nomadic lifestyle, and remaining in one location would not allow them to take advantage of the seasonal cycles. Their lifestyle allowed them to survive in a harsh desert environment that pioneers thought of as inhospitable. The native people were craftsman, weaving beauty into their baskets and painting their pottery. They made jewelry and told stories. They had families and religion. These were not the traits of destitute people barely scraping by, but of successful people with a rich culture.

Several distinct tribes have historically occupied the Great Basin; the modern descendents of these peoples are still in the Great Basin today. They are the Western Shoshone (a sub-group of the Shoshone), the Goshute, the Ute, the Paiute (often divided into Northern, Southern, and Owens Valley), and the Washoe. The map on the following page shows their respective territories.

With the exception of the Washoe, all the Great Basin Tribes are Numic speaking, which means that their languages all belong to the Numic language group - they are not the same language, but they are closely related. The Washoe language belongs to the Hokan family, which also includes the languages of several Californian and Southwestern tribes. Anthropologists use language to judge the relation of one people to another. Generally, the more closely related two languages are, the more closely related the people are who speak them.







FOOD

The people of the Great Basin utilized a wide variety of plants and animals for food. Harvesting patterns were seasonal. In the spring, greens, bulbs, roots, and tender plant shoots were gathered. Some greens were eaten raw, while others had to be cooked to remove the bitterness. Roots and bulbs, dug with a hardwood stick, could be dried or eaten raw. Summer's arrival added flowers (whole or just petals) as well as berries and other fruits. Fruit and berries were eaten fresh or dried for later. Meat or fat mixed with dried fruit made pemmican, a nutritious food that lasted for months without spoiling.

Fall was the most important food gathering time, as the people depended on their caches to hold them through the winter. Seeds from a variety of plants, including shrubs, mustards, and grasses, were collected and often ground into course flour. The nut of the Pinyon pine was the single most significant food resource for the peoples of the Great Basin. It is rich in fat and protein and supplies all 20 essential amino acids, as well as phosphorous, iron, and vitamins B and C. In late August, scouts searched out Pinyon groves promising a good harvest. In September, families – who had been on their own or in small groups for the spring and summer – would gather in large groups for the pine nut harvest. This event was important both for subsistence and for social purposes. While the men beat the nut-filled cones from the trees with long sticks, the women and children gathered the cones in piles, setting fire to them to remove the pitch and open the cones. Shells were then cracked open and the seeds parched for preservation. Although this was a time-consuming process, one family of four could collect over a thousand pounds of nuts - enough to hold them through the cold winter to come.

Hunting was important for supplementing plant foods. People of the Great Basin hunted large and small game such as deer, antelope, bighorn sheep, jackrabbits, pocket gophers, squirrels, and waterfowl. Group hunting techniques were used for events such as rabbit drives, where men, women, and children would herd rabbits into gullies lined with nets. This provided an important food source as well as skins for clothing and blankets. In areas with lakes, such as the northwest and Tahoe regions of the Great Basin, fishing was another valuable source of food.

CLOTHING

Although clothing varied throughout the Great Basin, there were basic items that were common. Men often wore poncho-like shirts made of skins (usually buckskin) or twined sagebrush bark. Breechcloths were worn with the shirts, or alone in warmer weather. Skin or twined bark leggings were also worn. Women wore woven fiber aprons from the waist to knees that were either single (front only) or double (covering front and back). Where the resources were available, women wore skirts or full-length gowns of buckskin. Both men and women wore fur robes or blankets in the winter. Rabbit skins were the most popular furs – with a hundred skins going into just one blanket - but bighorn, antelope, and deer were also used. Clothing fibers were harvested from sagebrush bark and tule; fibers were dampened and pounded until they could be woven or twined. Animal skins were skillfully tanned. Ute skins, for example, were considered exceptional and were a valuable trade item. Some adornment was added to clothing, such as fringe, beads, and feathers, and jewelry such as shell bead necklaces was worn as well.



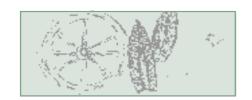
SHELTER

Since most Great Basin Indians were nomadic, permanent shelters were rare. In spring, summer, and fall, simple sunshades and windbreaks were made with available materials, such as sagebrush and willow. Conical huts framed with willow boughs and covered with reeds, branches, and grass provided more solid summer shelter. Winter houses were similar, with bark added to the cover and rocks placed along the bottom to prevent wind damage and provide some insulation. A hole was left at the top of the frame to allow smoke from fires to escape. Sometimes a two to three foot foundation was dug with the framed structure placed over it. For additional insulation, the framed structure could be covered with earth.

MEDICINE

Great Basin Indians used the abundant and diverse plants not only for food but also for medicines. The natural world provided them with a pharmacy, and their intimate knowledge of the plants allowed them to take advantage of it. Some plants were eaten, while others were made into medicinal teas. Bark, roots, and leaves from numerous plants were utilized to treat everything from colds to heart problems to smallpox. The Shoshone, for example, used 52 plants for treating colds, 57 for venereal diseases, 44 for inflammation, 48 for stomach problems, and 37 for rheumatism (Trains, Henrichs, and Archer, 1941). As nomadic groups were small, often consisting of just one immediate family, it was beneficial for everyone to have some knowledge of medicinal plants. In addition to this, there were people (shamans or medicine men) considered to have healing powers, and these people were sought out to cure serious illnesses.



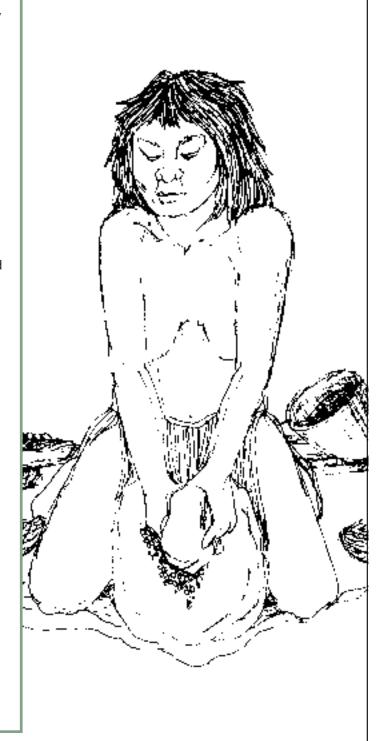


TOOLS

Great Basin Indians fashioned a variety of tools from the natural resources. Arrow points, chipped from obsidian or fire hardened mountain mahogany, were fastened to arrows made from straight-stemmed plants. Bows were made from straight-grained woods such as juniper and snowberry. The bow and arrow was a valuable hunting tool. Nets and snares - made from milkweed, cattails, sagebrush bark, and Indian hemp - were useful for trapping small animals.

Baskets, woven from willows, sumac, reeds, and grasses, were another invaluable tool. Great Basin Indians used baskets for gathering, carrying water, and even for cooking. A tightly woven basket lined with pine pitch could hold water; fire-heated stones added to the water would bring it to a boil.

Digging sticks helped to turn out roots and tubers; hooked poles were used to harvest pinyon nuts; and manos and metates (similar to mortars and pestles) made grounding seeds into flour possible. Toolmaking skills allowed the people of the Great Basin to use all that the environment provided them.





KINSHIP

Social patterns of Great Basin Indians revolved around families and family clusters, with large group gatherings being temporary and seasonal. The scarcity and unpredictability of food sources made the small family group the most efficient group size. Subsistence activities, such as gathering seeds, were no more effective in a group than on one's own. Larger family groups would come together for events such as rabbit drives and pinyon nut harvests.

Marriage was the most important relationship, though there was no formal marriage ceremony. Generally, a couple "became" married over time, as the man spent nights at the woman's home until their families recognized them as married. Gifts were exchanged between families, with both families giving equally, though in certain Shoshone groups the groom's family gave gifts equivalent to a "bride price". Married couples were free to settle where they chose; there were no set rules about joining the bride's family or groom's family. Decisions on who to join after marriage were based on practical and personal considerations such as availability of resources or desire to be (or not to be) with a certain sibling.

Marriage extended beyond the couple, joining two families or sibling sets. Strengthening family ties was an important consideration, and often sets of siblings married each other (two sisters of one family to two brothers of another or a sister and brother of one family to a sister and brother of another). Although monogamy was the standard, polygamy did occur as well. Marriage within kindred was generally forbidden throughout the Great Basin, though cross-cousin marriages did occur. Divorce was as informal as marriage, occurring simply when one spouse (man or woman) left the other.

ORAL TRADITION

With the completion of the pine nut harvest and the coming of winter, the season for storytelling arrived. Storytelling was important for both entertainment and education. Stories were told around the fire in the evenings, with small audiences consisting of immediate family members and perhaps a few neighbors. There were two categories of stories: legends and myths.

Legends were more recent stories, told as if the storyteller had heard of the event from a first or secondhand witness. Several common themes were prevalent in Great Basin legends. These included women being abducted and making a perilous escape and journey home, and visits to the underworld - an ideal world of animals, green grass, streams, mountains, and trees. Legends often included anthropomorphic supernatural beings that appeared as diminutive images of man or as giants. The water baby, an evil spirit inhabiting streams, lakes, and springs, was a common character throughout Great Basin legends. It visited camps at night, stealing babies and pulling people into rivers; the water baby was greatly feared.

Myths were stories of the ancient past or an earlier world with personages often characterized as animals. Many mythological themes are common worldwide; "The Theft of Fire" appears in Great Basin mythology as "The Theft of Pine Nuts". Great Basin Indians did have creation myths, though they seemed to be more interested in how the world might end as opposed to how it began. There are stories that tell of the "first parents" and the dispersal of the tribes, and trickster stories featuring animals such as the coyote and the cottontail.



WESTERN EXPANSION

EARLY SETTLERS IN THE GREAT BASIN

As America's population expanded in the early 1800s, rumors of rich natural resources and a landscape teeming with fur, lumber, minerals abounded. Explorers and pioneers came to a virtually unknown area just west of the Rockies, the Great Basin. Some came in search of riches; some came for refuge.

FUR TRADE

Trappers and traders working for fur companies were amongst the first Caucasian explorers. Large beaver populations had enticed fur companies into the continent's interior; now these companies looked to the Great Basin to expand their enterprises.

Peter Skene Ogden of the British Hudson Bay Company led six expeditions into the Great Basin between 1824 and 1830, with the purpose of establishing an economic presence between the Rocky Mountains and the prosperous farmlands of the West Coast. Ogden's final -and most significant-expedition discovered the Humboldt River and followed it to its source, setting the stage for further exploration and settlement.

The Rocky Mountain Fur Company was The Hudson Bay Company's toughest competitor. In 1826 and 1827, Jedediah Smith embarked on an expedition that started near the Great Salt Lake and crossed into eastern Nevada. An avid journalist, Smith recorded his journey through the arid region, noting the natural wonders and, ironically, the lack of profitable fur to be had. Trappers and explorers such as William Sublette and Joseph Walker reported vegetation sparse and animals for trapping scarce. The landscape was recorded as a barren wasteland, and existing beaver populations were decimated. The fur trade did not last long, but it opened trails to California's gold fields and the rich farmlands of Washington and Oregon.

MILITARY EXPEDITIONS

Military expeditions that conducted land surveys and scientific inventorying began with the last of the fur trade and the initial mining booms. Captain John Fremont explored the northern edge of the Great Basin between 1842 and 1844. Venturing into the northeastern edge of the Great Basin, Fremont's expedition took him along the Humboldt and Owens Rivers. He completed his circumnavi-gation of the area in 1845. In subsequent years Fremont, along with others, reentered the Great Basin to conduct surveys for the transcontinental railroad. However, due to the Civil War, the transcontinental railroad did not become a reality until 1869.

In 1859, Captain James Simpson and his party of 64 men left Camp Floyd, outside Salt Lake City, to scout out a direct wagon route to San Francisco. By this point in time, a fair amount of development had occurred in the Great Basin. Mail and pony express stations dotted the Overland and Santa Fe trails, and ranches and farms thrived. Although Simpson's party had not discovered the Great Basin, Simpson did lay claim to establishing a new route across the Great Basin some 208 miles shorter than any other existing route.

Other more opportunistic sorts also laid claims to shorter and better routes west. One such promoter, Lansford Hastings, interested mostly in political gain and "the presidency of the California territory", invented "a nigher route", Hastings Cutoff. However, Hastings' route would prove to be a scam and lead westward bound pioneers to certain disaster. The Donner Party are the most famous victims. Traveling Hastings Cutoff across the waterless salt flats, they reached the Sierra Nevada severely dehydrated and broken just as winter arrived (it is said their tongues were black and swollen).



SETTLEMENT

Mining booms in California set the stage for settlement in the Great Basin. By the 1840s the Overland Trail in the north and the Santa Fe Trail in the south were established routes across the Great Basin. Entrepreneurs set up small, transient camps along the trails to supply the wagon trains. At the same time, the Mormons were establishing self-sustaining communities throughout the Great Basin. These settlements also provided food and goods for emigrants passing through.

The discovery of the Comstock Lode in the summer of 1859 spawned Virginia City and brought mining into the Great Basin. Thousands of cattle and sheep were moved from California to the Comstock, and permanent ranches were established along the Great Basin's western edge.

Stage and freight businesses entered the Great Basin in the late 1850s and 1860s, connecting the small settlements throughout the region. Populations in these remote places surged. To the east, the White Pine Mining Rush in the late 1860s connected east and west in the Great Basin. Mining camps and towns near the new strikes grew as settlers developed ranches and farms.

THE RAILROAD AND CHINESE IMMIGRATION

The 1860's push for a transcontinental railroad brought more people to the Great Basin. Two companies, the Union Pacific and the Central Pacific, were laying track across the region, from the west and east respectively. As completion of the railroad drew near, track was laid at record-breaking speed. Both companies wanted to be the first to reach the designated meeting place - Promontory Point, Utah.

The railroad project added a new element to the Great Basin population, bringing in thousands of Chinese laborers from overseas. Although there was resistance to an influx of Asian immigrants, railroad crew bosses quickly noticed how talented and hard working the Chinese laborers were. The companies sent recruiters to China to attract men to the project.

Life on the rail crew was harsh: laborers worked long days (even around the clock during the final push to Promontory Point) and in dangerous conditions. Although a handful of the workers were rewarded with a pension of sorts, no one knows how many were killed or maimed. While some of the laborers returned to China, many settled in the Great Basin. Many ran laundries or cooked for miners and ranchers, while others opened restaurants or became business men.

THE MORMONS

In the early 1850s as Mormon settlers moved west out of Utah, they initiated the trend of permanent settlement in the Great Basin. In June, 1851 John Reese and his party from Salt Lake City arrived in Carson Valley. There, they planted grain and vegetables, which they later sold to emigrants passing through on their way to California. Reese's success brought other Mormon settlers west, establishing settlements in the Eagle and Washoe valleys. By the end of 1851, more than 100 people occupied the settlement known as "Mormon Station" (present day Genoa, Nevada's first town).

The Mormons developed stable agricultural communities. Building flour mills and developing irrigation ditches to feed the crops, the communities flourished. In 1857 Brigham Young requested Reese's return (and entire settlements) to Salt Lake City. However, the departing Mormons did not allow their hard work to go to waste; they either found caretakers or sold their farms to other settlers. People were in the western Great Basin to stay.



THE PONY EXPRESS

With tens of thousands of people moving west, a need for improved communication across the country became apparent. In 1860, a private mail carrying company, The Pony Express, was established. It promised the delivery of letters from Missouri to California in ten days. The Pony Express consisted of a chain of relay stations, 15 miles apart, from St. Joseph, Missouri to Sacramento, California. Riders, switching out horses at each station, could cover up to 200 miles in a day. The Pony Express charged a pricey five dollars in gold for the delivery of one letter. Had no competition arisen, the Pony Express may have lasted many years. However, the horses and riders became obsolete only eighteen months out, as the transcontinental telegraph line was completed. The ruins of several Pony Express stations can be seen along Highway 50.

RANCHING

The lure of gold and mineral strikes beckoned many settlers west in the mid 1800s. But when strikes eluded them and their dreams fell short of realization, a few determined, industrious individuals found their livelihoods in agriculture and livestock. These ranches and farms supplied emigrants and miners with needed food and supplies. The first ranchers were Mormons, settling in Carson, Eagle and Washoe Valleys in the 1850s. Mining rushes boosted the population greatly, with a subsequent increase in ranching through the 1860s.

Nevada achieved statehood in 1864, and with mineral strikes tapering off, political leaders started to look at cattle and sheep grazing as a future financial boon to the area. Ranching has a long-standing history in the Great Basin. Today, the trend continues. Cattle and sheep grazing are a vital part of the region's economy, culture, and heritage. Families hold onto their legacies and history, steeped with tradition and ties to the land.

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MINING

News of gold brought thousands of people westward in search of riches. An estimated 25,000 emigrants traveled through the Great Basin en route to California during the 1849 Gold Rush, but when mining opportunities dwindled in the far west, miners prospected in other areas, including western and eventually eastern Nevada.

The discovery of the Comstock Lode in 1859 brought mining into the Great Basin with full force. The Comstock proved to be one of the world's richest ore deposits (silver and gold). Its discovery brought thousands of people, including engineers, capitalist entrepreneurs, and bankers. Within a couple of years Virginia City popped up rapidly, complete with fire brigades, churches, fraternal orders, theaters, restaurants, schools, and, of course, saloons and gambling halls. The Comstock also spawned engineering ingenuity. Most of the deposit lay deep underground, so miners needed new extraction methods. Innovations such as the "square-set method", an elaborate system of timber-framing mine shafts, made retrieving ore from the Comstock and other Great Basin deposits possible.

Although the Comstock eventually petered out, mining continued in the Great Basin. Prospectors moved east and boomtowns followed them. Some strikes produced fabulous wealth in a short time (\$30 million worth of ore at Aurora in ten years), while others were less fruitful. Silver was the primary metal mined, though tungsten and gold were also mined. Most of the boomtowns eventually faded into oblivion, whether they had been successful or not. Some towns, such as Austin, Eureka, and Pioche have survived, despite the boom and bust nature of the economy. Evidence of mining remains throughout the Great Basin; it is common to come across old cabins and prospectors' digs.

Mining the Great Basin was resource intensive, requiring plenty of water and plenty of fuel. These resources, not readily available in the Great Basin, took ingenuity to come by. At Osceola, a 16-mile and an 18-mile ditch were constructed to bring water from the mountains. Over \$100,000 was spent on the ditch, with the hopes of finding huge ore deposits. Unfortunately for the investors, Osceola never operated at a profit. Remnants of the 18-mile ditch can be seen today in Great Basin National Park. Charcoal ovens also remain from the mining era; millions of trees were turned into charcoal to heat the smelters, as burning wood was not hot enough.

Mining booms in the Great Basin were not only financially significant, but politically significant as well. The Comstock Lode brought statehood to Nevada, and with every subsequent strike, new counties were established, county seats designated, and courthouses built. Strikes in the southern and eastern Great Basin expanded the borders of Nevada, while shrinking the Utah Territory

While mining continues to be an important industry in the Great Basin, the boom and bust nature of the state's economy has been stabilized by ranching, tourism and gaming.





MINERALS

Industrial minerals (nonmetallic minerals) have become commercially attractive only since about 1940 as local population centers have grown and demand from growing western cities increases. Today, in addition to salt and borax, other minerals are mined including gypsum, diatomite, barite, limestone, silica, perlite, scoria, and fluorspar. Below is a partial list of metals and nonmetals and their uses.

SILVER: Photography, jewelry, mirrors, coins, electronic circuitry, and wire.

GOLD: Jewelry, dentistry, international money standard, electronic components, and coatings.

MERCURY: Thermometers, barometers, and diffusion vacuum pumps.

COPPER: Batteries, wiring, water piping, corrosion resistant parts, alloyed to make brass or bronze.

MOLYBDENUM: Lubricants and alloys (light and high strengths).

LITHIUM CARBONATE: Used as a fluxing agent in ceramics and in the aluminum industry to lower the melting point of the cryolite bath. Lithium is used in lubricants, batteries, synthetic rubber, air conditioning, welding, and industrial drying.

MAGNESITE: Used to manufacture cattle feed, fertilizer, sugar, and water purification.

CALCITE (CRUSHED LIMESTONE):

Paper, agriculture, construction, quicklime, metallurgy, and chemicals.

BARITE: Drilling muds, paint, diagnostic medicine, glass flux, and bowling balls.

DIATOMITE: Filter aids for beer, wine, corn oil, corn syrup, fillers for polishes, catalysts, fertilizer, and insulation.

GYPSUM: Wall board, plaster, and cement.

ANTIMONY: Alloy with lead in battery plates, flame proofing devices, semiconductors, paints, and ceramic products.

BERYLLIUM: Light, high strength alloys.

MANGANESE: Alloys with steel, high strength magnets.

ZINC: Used mainly as a protective coating for iron and steel in white paint pigments.

PERLITE: Used as a lightweight aggregate in plaster and concrete, and in thermal and acoustic insulation.

POTASH: Used chiefly in fertilizers.

PETROLEUM: Fuel, chemicals, solvents, lubricants, plastics, rubber, etc.

WATER: May be the most important nonmetal resource in the Great Basin.

MAKE YOUR OWN LIST OR NOTES:

ROCK ART OF THE GREAT BASIN



SUBJECTS:

Art, language, social studies

LOCATION:

Classroom

DURATION:

1 hour

OBJECTIVE:

List methods by which information can be transferred from culture to culture. Name at least three reasons why preserving the knowledge of past cultures is important to modern cultures.

BACKGROUND:

Rock art is a general term for pictographs and petroglyphs. "Picto" means to paint, and "graph" means to write which makes a pictograph a painted symbol. "Petro" means rock and "glyph" means carving, and that, in turn, makes a petroglyph an image carved in rock. No one knows for certain if rock art symbols tell a story, had spiritual meaning, or were a form of graffiti.

KEY VOCABULARY:

Pictograph, petroglyph, and rock art

MATERIALS:

Activity guide, pictures of pictographs and/or petroglyphs from the Great Basin, paper, art supplies.

METHOD:

- 1) Begin with an introduction to how we have learned valuable information about the uses of certain plants and animals from other cultures. (For example, in the Tehuacan Valley in central Mexico, tiny cobs of an early variety of corn have been unearthed from dry caves. This corn, dated approximately 5,000 B.C., is believed to have evolved from teosite, a wild grass found in many areas of Mexico. The plant and the knowledge of its propagation gradually passed from group to group up through northern Mexico and eventually into the Southwest.)
- 2) Ask the students to help identify some of the methods by which information might have been transferred from one culture to another. Talk about the following methods: petroglyphs, pictographs, songs, stories, archeological evidence, or conversations.
- 3) Illustrate the transfer of knowledge by telling a Great Basin myth or legend from a local tribe. For example, on the following page you will find a Shoshone tale, taken from "The Southern Paiutes" by La Van Martineau, called "How the Indians Acquired Salt".
- 4) Discuss the fact that if one of these methods is lost or destroyed, such as archeological evidence, we lose the ability to unlock some of the secrets of the world around us.
- 5) Have the students recall an important event or experience in their lives. Have them create a story about that event using pictographs or petroglyphs to record it. Have the students share stories with the class.

EXTENSION:

Make a list of our most commonly used food crops (i.e. corn, squash, beans, grains, potatoes). Research the origins of these crops and which native people used them. Create a bulletin board with pictures of modern crops and their predecessors from the wild as well as the people who eat them today and the native people who cultivated them in the past.

ROCK ART OF THE GREAT BASIN



"One time salt used to be human. That was when the Indians didn't have any salt. Salt traveled all over the country and as he came to each little Indian camp, he would ask them if he could stick his finger into their boiling meat. Some would let him and then when they tasted their meat, they found that it tasted better. Salt then gave them instructions as to which way they should go. When the Indians followed the instructions and arrived at the designated place they found a salt deposit. They brought some home and ground it up on a rock and used it. This is how Indians got salt. There were some other Indian camps that wouldn't let him stick his finger into their boiling meat and unto this day there is no salt deposit around the vicinity of their land."

NOTES:

ROCK ART OF THE GREAT BASIN II



SUBJECTS:

Art, language arts, and social sciences

LOCATION:

Classroom

DURATION:

1 hour

OBJECTIVE:

In their study of rock art, students will use regional rock art symbols or their own symbols to: a) create a pictograph or petroglyph replica; b) cooperatively create a "rock art panel"

BACKGROUND:

Rock art "occurs in caves, on cliff walls, or on boulders. Rock art occurs all over the world, in virtually every culture, and surviving examples are known to be as old as 30,000 years, from the time of the last Ice Age" (Hurst and Pachak, 1989, p.1).

KEY VOCABULARY:

Pictograph, petroglyph, rock art

MATERIALS:

Activity guide, pictures of pictographs and/or petroglyphs from the Great Basin, cotton swabs (Q-tips, enough for all the students), household bleach mixed with an equal amount of water, and containers for the bleach mixture

METHOD:

- 1) Distribute a copy of "Rock Art Symbols" master to each student or display on an overhead projector. Give students time to observe and talk with each other about the symbols.
- 2) Have the students close their eyes and imagine that they are living in the Great Basin 1,000 years ago. Suggest that they imagine they have been traveling and have stopped in the shade of an overhanging rock to rest. While there, they carve or paint figures into the rock wall. Ask the students to imagine the individual symbols they would draw and to imagine them as part of a panel.
- 3) Explain to the students that they will be using symbols to make an artwork which resembles petroglyphs. They will also contribute to a rock art panel. They may use symbols from the "Rock Art " master for their artwork, or they may create their own symbols.
- 4) Give each student a piece of brown construction paper and a cotton swab (Q-tip). The art is created by dipping the cotton swab into the bleach mixture and rubbing the wet cotton swab on the construction paper to create the desired design. Demonstrate the process, emphasizing to the students that they must be very careful not to touch anything but their paper with their cotton swab. Place a small container filled with a small amount of bleach mixture at the center of each work table.
- 5) Lay a roll of brown butcher paper on each table or on the floor. Divide the class into groups no larger than 10 students each. (An adult aide for each group might be helpful.)
- 6) After the students have completed their own "pictograph", have them take turns making figures on the large piece of butcher paper. Place the students a few feet apart from each other and have small groups work one at a time. Exhibit the "rock art panel" in the classroom or hall way. Have the students share the meaning of their rock art.
 - Adapted from "Intrigue of the Past" by Smith, Moe, Letts, and Paterson.

PREHISTORIC TRAVEL AGENT



SUBJECTS:

Art, language arts

LOCATION:

Classroom

DURATION:

45 minutes to an hour

OBJECTIVE:

Students will learn about life of the Fremont Indians.

KEY VOCABULARY:

Fremont, culture

MATERIALS:

Poster board or butcher paper, construction paper, and colorful markers

METHOD:

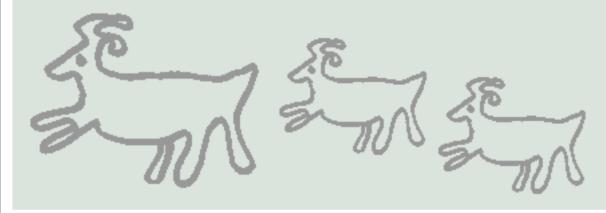
- 1) Have the students pretend they are travel agents from 1,000 years ago. They will be putting together a travel packet for prospective clients wishing to travel to the Great Basin area.
- 2) Using various types of paper or poster board, students will create posters, brochures, etc., describing a vacation to the Great Basin. Some questions they will need to answer are: What is the climate? What are the customs of the people who live in the area? What language is spoken? What kind of shelter are they likely to stay in? What are they likely to eat?
- 3) Display the posters and brochures in the classroom. Have students share their ideas.

NOTES:

You may wish to contact a local travel agency for samples of travel brochures and posters. If you prefer, students may work on this project in teams, rather than as individuals. Also, you may wish to enhance the student's computer skills and have them produce the brochures using a word processor.

OPTION:

Have the students pick historical times and write a brochure about visiting one of the historical Native American groups in the Great Basin area.



AMERICAN INDIAN POTTERY



SUBJECTS:

Art, social science

LOCATION:

Classroom

DURATION:

1 hour

OBJECTIVE:

State two major functions of pottery. Develop one pottery piece. Name four ways to decorate pottery.

BACKGROUND:

The only information we have about ancient peoples comes from the artifacts uncovered hundreds or thousands of years later. Pottery left by Great Basin Indians has been found in numerous locations. Much of the pottery is decorated; different patterns correlate to specific tribes. The Fremont, for example, all produced a specific style of grayware pottery. All materials for making pots and decorating them were harvested from the local environment.

KEY VOCABULARY:

Pottery, decorative, utilitarian

MATERIALS:

Activity page, one piece of modeling clay for each student, various natural tools for making pottery designs (sticks, fiber, seashells, pine cones, feathers, etc.).

METHOD

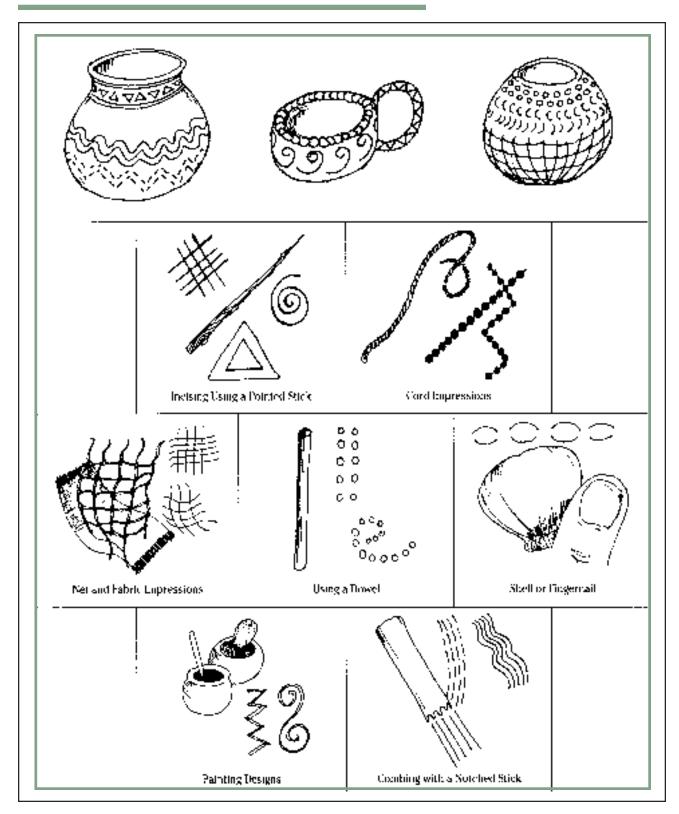
- 1) Discuss with students the former life-styles of American Indians living in the Great Basin. Discuss the types of tools the hunter-gatherers used. Then discuss how agriculture allowed a more sedentary lifestyle and how pottery provided a more durable storage container for these agri-gatherers. (Pottery was also used by hunter-gatherers.)
- 2) Ask the students to make a list of vessels in their own homes that are strictly utilitarian (pots and pans) and those that are decorative (flower vases or pieces of sculpture). Discuss the two types of pottery (utilitarian and decorative) and the different uses of each type.
 - Utilitarian: Used for storage, cooking, and drinking vessels.
 - Decorative: Ceremonial objects and decorative art.
- **3)** Discuss how the size, shape, and design of a pottery vessel might vary depending on its use. How does design and shape of ancient pottery compare with the design and shape of objects we use today?
- **4)** Using a piece of modeling clay, demonstrate how a pottery vessel might have been made. Where would the potter have found clay? Knead the clay and using coils, form a vessel. Smooth out the coils using your hand or a wooden paddle. What happened to the vessel after it was formed?
- 5) Using the illustrations on the activity page, discuss the various techniques used to decorate a vessel and the pattern created. Why decorate a vessel?
- **6)** Give each student a piece of modeling clay and provide each group with tools for decorating their pottery vessels. Encourage students to try ancient or imaginative shapes.

EXTENSION:

Visit a museum displaying pottery made by Native Americans. Ask an artisan to visit the classroom and demonstrate clay art.

AMERICAN INDIAN POTTERY





MAKING CORDAGE



SUBJECTS:

Science, social studies, mathematics, language arts, and art

LOCATION:

Classroom

DURATION:

1 - 2 hours

OBJECTIVE:

Students will:

- a) Make cordage
- b) Learn a skill prehistoric people needed for everyday life
- c) Compute the amount of time and materials that might have been required to make cordage in prehistoric times
- d) Conduct a scientific inquiry to study the contents of an archeological site

BACKGROUND:

The native people of the Great Basin made everything they needed from materials found in their local environment. However, not everything was ready for use the way it grows. Great Basin Indians used techniques such as twining to strengthen the materials they collected. The same method is still used in making cable.

KEY VOCABULARY:

Cordage, fiber, replication, and sinew

MATERIALS:

One spool of hemp rope (about 1/2 inch in diameter) or a bag of "raffia". If you are unable to obtain some type of native fiber, try cotton string or wool yarn (or any other string).

METHOD:

- 1) Demonstrate how to make cordage with commercial hemp fibers.

 Divide the class into groups of 4 to 5 students. Give each student 2 strands of fibers. Assist each group, asking students who readily learn the procedure to help the other students.
- 2) To begin, if you are right-handed, hold one end of strand A and one end of strand B together side-by-side, in your left hand between your forefinger and thumb. If left handed, hold the strands in your right hand. Pick up strand A between your right forefinger and thumb, and twirl the strand away from your body. (See diagram.)
- 3) Take the twisted strand A and bring it toward your body, over and under strand B, step 2 in diagram.
- **4)** Hold strands A and B between your left forefinger and thumb where you crossed A over strand B. Repeat the twirling and crossing sequence; pick up strand B, twirl it away from your body, and cross it over and under strand A.
- 5) Continue these steps. The twirling in one direction and crossing in another direction forms an interlocking pattern much like that of a machine made rope. If the cordage looks twisted in the same direction, then the locking twist is not taking place, and usually the strands are being twisted in the wrong direction.

MAKING CORDAGE



- **6)** Left handed people need to reverse the directions of twirling and crossing. They twirl the strands toward their bodies, and cross the strands under rather than over.
- 7) The process of making cordage seems difficult to describe, and it sounds much more complicated than it really is. Try it; it's surprisingly easy!

Extension:

- 1) Based on their experience in making cordage, have the students share their impressions of what daily life of the prehistoric people might have been. In what ways were their daily lives similar? Different?
- 2) Tell the students that archeologists have excavated an archeological site and more than 100 pieces of cordage were found in it. The cordage artifacts were classified and described as follows:

Category 1

Material type: milkweed or dogbane

Average thickness: 3 millimeters in diameter

Average length: 105 centimeters

Number of pieces: 68

Category 2

Material type: sagebrush or juniper bark

Average thickness: 6 millimeters Average length: 32 centimeters

Number of pieces: 30

Use the following questions to learn and think about the two types of cordage,

- a) Why is sagebrush bark cordage thicker than the milkweed cordage? Brainstorm reasons (sage brush is harder to work with; sagebrush fibers are thicker, etc.)
- b) Select a hypothesis. For example, milkweed fiber is stronger than sagebrush bark fiber, therefore, it doesn't need to be as thick as sagebrush bark to be as strong
- c) Test this hypothesis by setting up an experiment to determine the relative strengths of cordage made from two fibers. If you did not use natural fibers to make cordage in the classroom, you can use different types of commercial string or yarn to design an experiment. For example, test the difference between cotton string and jute string.
- d) Unless milkweed cordage is poorly made, it should be stronger than the sagebrush cordage. If the experiment determines that the milkweed cordage is stronger than the sagebrush, ask the following question, why is there more milkweed cordage than sagebrush cordage found in acheological studies? (Milkweed may have been chosen because of its strength. Availability of the two fibers and the purpose of the artifacts may have also been determining factors.)
- 3) Summarize how and why archeologists use experimental archeology to study past life ways.
- **4)** Have students write a creative story, a report, make a chart, or construct a diorama about living in the Great Basin without modern technology. They should include five things they would need to know how to do in order to survive.
- 5) Discuss how technology changes culture. Suggested examples are North American Indians acquiring horses and the cultural changes that take place when hunters and gatherers become settled farmers.

ANTELOPE HUNT

SUBJECTS:

Social studies, physical education

LOCATION:

Outside, in a large area or in the gym

DURATION:

30-45 minutes

OBJECTIVE:

Students will understand that the Great Basin natives lived a life based on cooperation, and that communal drives for antelope and rabbits provided food for the whole family or band.

BACKGROUND:

During the fall, the antelope drive took place. It required the cooperation of many hunters. The shaman directed the hunt. Before the hunt, everyone helped to prepare a corral. This corral was made of sagebrush, cedar trees, and rocks. The corral was generally 2 miles long and 3 or 4 feet high. Ceremonies, promising a good hunt, were performed with the hunters. If the signs did not indicate a good hunt, it was canceled. If the signs promised a good hunt, the hunters continued the hunt. The drive began early in the morning. Traveling 20 miles or more, the most physically fit hunters searched for the herd. First the hunters searched for the leader of the herd. Once the leader was located and killed, the other antelope became disoriented. The hunters now had the advantage over the herd and they would then drive the antelope toward the corral. Once the outer area of the corral was reached, the hunters would drive the antelope into a pen in the center of the corral. Since the antelope could not jump, they could not escape, and they were left overnight. The following day, the native people killed enough for themselves and let the remaining antelope go free. All parts of the antelope were used for food, clothing, or tools.

MATERIALS:

Flags (optional) and boundary markers

METHOD:

- 1) Divide the class in half, separating them into two teams, antelopes and hunters.
- 2) Send the antelopes to their area. Have them pick an antelope for their leader, making sure that they don't tell "the hunters" who is the leader of the herd. Remember, other antelopes follow the leader. After picking the lead antelope, the antelope team should spread out to graze for food and wait for the hunters.
- 3) Have hunters watch the antelope and try to determine who is the leader of the herd. Once they determine this, the hunters will spread out and try to capture the leader. To tag or take the flag is a capture.
- **4)** As the hunters guess and try to surround the leader, the real leader, if not picked by the hunters, should try, silently, to get to the safety area without the hunters guessing it is him/her. The other antelope should be watching and trying to follow the leader, since he/she is not allowed to call out to anyone.
- 5) Antelope need to stay in the hunting area unless the leader gets to safety or is tagged by a hunter. If all the antelope escape, the game is over.
- 6) Once the leader is captured, all antelopes in the hunting area must go to the corral and the game is over.

From "Celebrating Nevada Indians"

AMERICAN INDIAN LEGENDS



SUBJECTS:

Social studies, language arts, and art

LOCATION:

Classroom

DURATION:

3 hours

OBJECTIVE:

Students will understand how the Native American tribes of the Great Basin used storytelling as an oral tradition; as a way of preserving the culture and history of their people. Storytelling also provided a means to teach about relationships between people as well as between people and nature, and provided a form of entertainment and a source of amusement.

BACKGROUND:

See the Resources list at the end of this guide for books and reference materials containing Native American folklore. "Celebrating Nevada Indians" contains many stories and legends.

KEY VOCABULARY:

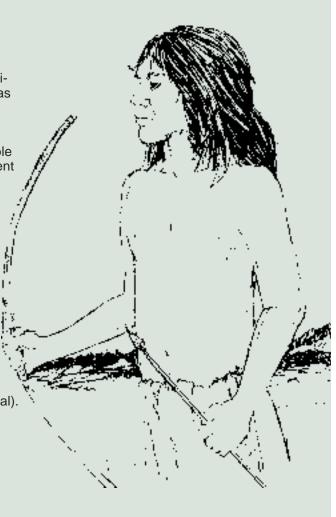
Legends, stories, myths

MATERIALS:

Native American stories and legends (check library for reference materials), paper and pencils, materials to make puppets (optional).

METHOD:

- 1) Divide the students into small groups and have them read one or more of the stories from books on Native American legends and myths.
- 2) Have the students create a play or a puppet show, writing scripts for each character in their selected story.
- 3) After each presentation, discuss what the students have learned from each of their stories. Have the students speculate how the Native Americans may have used each story; did they use it to pass on information, for entertainment and amusement?



DESERT CORNUCOPIA



SUBJECTS:

Language arts, science, social studies

LOCATION:

Classroom

OBJECTIVES:

Name medicinal uses of two desert plants

BACKGROUND:

People have used plants as medicine for thousands of years. Many indigenous peoples are very knowledgable in the use of a wide variety of plants native to their homes. In some cultures, certain people (shamans, medicine men) are given the responsibility of learning the medicinal properties and treating patients. Many of our modern medicines are derived from plants.

KEY VOCABULARY:

Ethnobotany, pharmacy, medicinal

MATERIALS:

Activity page

METHOD:

- 1) Using the following activity page (and other background information), describe the use of plants by Great Basin native peoples. How was this information passed down from one generation to the next? Lead the students in a discussion about the plants used to cure illnesses and injuries.
- **2)** At present, more than 3,000 plants are used by tribal people throughout the world. Many of these medicines were used long before modern application. Use the following examples:

Quinine comes from the bark of various kinds of cinchona trees which grow in South America. Quinine was used by South American Indians to cure malaria. When the Spaniards arrived in the Americas in the 1600s, they learned its value from the native people. United States troops used large quantities of quinine during World War II and the Vietnam War. Today quinine is used to regulate heartbeats.

May Apple is a plant growing in eastern North America, bearing a single white flower and an oval yellow fruit. It was used by the Penobscot Indians to treat cancer. Study of this plant led to the discovery of a useful anticancer drug derived from a related plant in India.

- **3)** Discuss the importance of preserving native plant communities around the world because they may be used for curing illnesses and diseases.
- **4)** Have the students research a plant specific to the Great Basin and write a story about its uses as either a medicine, food, clothing, etc. (You can focus on one type of use, if you prefer, having all the students research only medicinal plants.) Compile the information into an ethnobotany plants notebook about the Great Basin.

EXTENSION:

Have a local herbalist or pharmacist visit your class to discuss modern uses of ancient medicines.

DESERT CORNUCOPIA



DESERT PHARMACY

Many cultures still use the plants listed below as remedies. Remember, plants cannot be collected in National Park Service areas. And remember also, it is not advisable to use any of these remedies yourself!



PRICKLY POPPY: Juice from a fresh plant was used to burn off warts. The tea was applied to sunburn to relieve pain and swelling. An ointment made from the seeds was also used on sunburn and other minor burns.



LUPINE: A lotion made of the leaves was used to treat poison ivy blisters.



CREOSOTE BUSH: Creosote was used in the treatment of many ailments and diseases, including colds, chest infections, intestinal discomfort, cancer, nausea, wounds, poisoning, and swollen limbs due to poor circulation. Sprigs of twigs and leaves were boiled as tea and served as a drink, or placed over fire to create steam that was inhaled in a sweathouse. The twigs and leaves were also pounded into a powder and pressed into a poultice for wounds. In cases of snake or spider bites, or a scorpion sting, creosote leaves were chewed and placed on the swelling.



MORMON TEA: Some people still brew a tea by steeping the green or dry twigs in boiling water. The tea was used to treat kidney ailments and stomach disorders, as well as to purify the blood.



LOCOWEED: This plant was used to treat stomach disorders. Crushed leaves were used to soothe a bad back.



PRICKLY PEAR: Skinned pads were used as a poultice for infections and cuts. The pads were placed against the injured area for several hours to absorb fluids. Pieces of the pad were also held in the mouth to relieve gum pain.



EVENING PRIMROSE: The whole plant was used as a poultice on spider bites. The plant, ground to a powder, was used as a dusting powder on wounds on sores.

MINING



SUBJECT:

Social studies

LOCATION:

Classroom

DURATION:

15-20 minutes

OBJECTIVE:

Students will learn about the difficult, but important process of reclaiming a mining site.

BACKGROUND:

Invite a representative from a local mining company to visit your class and discuss the importance of reclamation, regulations, and how reclamation affects the mining industry.

KEY VOCABULARY:

Reclamation, mining

MATERIALS:

Chocolate chip or nut filled cookies, toothpicks, paper and pencils

METHOD:

- 1) Pass out one cookie, a piece of paper, a pencil and a toothpick to each student.
- 2) Have students trace the outline of the cookie on a sheet of paper. (This will become "the mining site".)
- 3) Using a toothpick, have the students "mine" the chips out of the cookie. Students are rewarded for the number of chips they are able to extract. They must be careful not to demolish the cookie because they must put the cookie back together when they are finished mining.
- 4) Students must then reassemble the remaining cookie. This is "the reclamation of the mining site" and the students are penalized for the amount of area (cookie) left damaged outside the original area.

REMEMBER, BETTER RECLAMATION MEANS LESS IMPACT ON THE LAND AND OUR NATURAL RESOURCES!

TREASURE HUNT



SUBJECTS:

History, science, geography

LOCATION:

Classroom and outside

DURATION:

30 minutes introduction in class 40-60 minutes of search outdoors

OBJECTIVE:

Students will be able to define navigation and make use of the earth's magnetic field using a compass to find a treasure.

KEY VOCABULARY:

Magnetic field, orienteering, and navigation

MATERIALS:

Various magnets and iron filings, several compasses, a lost treasure story that the teacher will make up or find in the library, etc., and a treasure such as fruit or cookies

METHOD:

CLASSROOM DEMONSTRATION:

- 1) Demonstrate what a magnetic field is by using iron filings sprinkled on a white sheet of paper over a bar magnet. Translate the idea of this small field to that of the earth's magnetic field. (Compasses line up with the earth's magnetic field.)
- 2) Next, have the students construct their own compasses by tying a small bar magnet in the middle with thread and then suspending it from a table top. Let the bar come to rest on its own and compare with a compass reading! You can also label the one end of the white table to indicate the north arrow.

OUTSIDE ACTIVITY:

- 1) Create a story that involves local or area history. Involve the students by having them play act the roles of archeologists using clues provided in a story to locate a treasure. (The story need not be entirely true and children may be able to relate to an Indiana Jones type character.)
- 2) Set up a compass course ahead of time, leaving clues at each point directing the students to the next spot. A clue might be, "Walk 75 meters NW toward a large pine tree". Let the students work in groups of 2 to 4 depending on the number of available compasses. You may want to create more than one course so groups will have different routes and not end up going to the same places.

CREATE-A-LANDSCAPE



SUBJECTS:

Math, art, geography, geology

LOCATION:

Classroom

DURATION:

Several one 1-hour periods or as a term project

OBJECTIVE:

By building a model landscape using a topographic map, students will demonstrate how contour lines on topographic maps allow representation of a three dimensional world.

KEY VOCABULARY:

Topographic map, contour interval, map key, map scale

MATERIALS:

Local topographic maps, corrugated cardboard, paper mache, scissors, paper, tape, glue, paints, markers, and a large piece of foam core board for the base of the model

METHOD

- 1) Introduce students to a topographic map (of a familiar area) and discuss using a key and a map scale to locate things and figure out distances on the map. Next, discuss contour lines and the fact that they represent one elevation only. You can do this by preparing ahead of time several small models of common land forms. Land forms might include a round hill, a valley, etc., where each layer of cardboard represents one elevation. Assign each student a landform and have each of them prepare a simple model.
- 2) Introduce familiar landforms that may be unique features in your area. In the geologically active Great Basin, there are alluvial fans, cirques (glacially carved amphitheaters), canyons, old lake beds and corresponding shores, and tremendous cliffs that are often the result of intense faulting. Look up these landforms in any basic geology text and see if you have any present in your area to discuss with your students. If in doubt, request the assistance of a local geologist from a local federal or state agency, or a local hobbyist.
- 3) After instructing the students on how to use topographic maps and identify land forms, have them make a model of their landscape. This should be a class project with a large enough model to allow several students to work on it at one time.
- 4) Prepare copies of a local area map with a different elevation highlighted and labeled on each copy. You need not have copies for every contour line on your map. Instead, make a copy for every 100 or 200 feet in elevation, depending on how high you want your model to be (and how labor intensive). Have each student cut out an elevation line from his/her copy and then trace the resulting shape onto a piece of corrugated cardboard. Cut out the cardboard shape and label the piece with the elevation. Using a full topographic map as a guide, stack the pieces in order of increasing elevation. Be careful to align each piece correctly on the one below it so you end up with an accurate picture of your landscape.
- 5) Once you have laid out your basic landscape, you can turn it into a 3-D image. Smooth out the rough edges using paper mache. Next, using the map and the students' knowledge of the area, paint in roads, forests, fields and streams. Emphasize accuracy! To complete this project for display, place it on a core base, prepare a legend, a north arrow, and a scale bar. Be sure that students can now identify geologic landforms on their model.

RECREATE A GHOST TOWN



SUBJECTS:

History, library skills, archeology

LOCATION:

Classroom, outside offices, agencies

DURATION:

Major class project over a term

OBJECTIVES:

Students will:

- a) be able to access and use a variety of information sources in their local library, county records office, and local museums.
- b) reconstruct the history of a ghost town.
- c) learn to prepare a bibliography about the sources of their information.

BACKGROUND:

Mining in the Great Basin has followed an undulating pattern of booms and busts. In some cases, strikes produced more excitement and speculation than actual wealth. Even the biggest ore deposits eventually ran out. When mines were producing, towns sprung up around them, full of supply shops, restaurants, saloons, hotels, and homes. But when the riches in the earth were gone, the towns went with them, leaving behind ghost towns.

KEY VOCABULARY:

Ghost town, boom and bust.

Any number of vocabulary words will come up in the students' research. As they come across words, add them to the vocabulary list.

METHOD:

- 1) You and your students will reconstruct the history of an abandoned town using local resources such as newspaper clippings, old photographs, accounts of senior community members, county records, and information available through the local Bureau of Land Management (BLM) or United States Forest Service (USFS) offices.
- 2) There are well over 300 ghost towns in the Great Basin and very little is known about most of them. Anything your class does is likely to be original research and the students should be made aware of this. Much of the research will be indoors but, if feasible, you could arrange a field trip to the site to map and explore the area.

NOTE:

A field trip such as this should be done with very strict supervision to protect the resource as well as the safety of the students. Perhaps it might be best to do a field trip such as this with the aid of a BLM researcher. Remember, many of these areas are riddled with abandoned mine shafts that pose a deadly hazard!

PULLING UP STAKES



SUBJECTS:

Art, language arts, social studies

LOCATION:

Classroom

DURATION:

1 class period

OBJECTIVE:

Discuss and write about the inspirational value of the experience of the early settlers.

BACKGROUND:

Moving west was risky business. Many men went alone, in search of wealth, leaving behind everything and everyone they knew. They had no guarantee of success and were banking on the unknown.

Others brought their families with them. Homesteaders moved west with great hope of starting new lives and working the land, but this was risky as well. What if the land they staked was not fertile? What if there was a drought the first season? Or fire? What if someone in the family became ill - where would they find a doctor? Moving west gave tremendous opportunity, but required strength, perseverance, and faith.

KEY VOCABULARY:

Homesteaders, miners

MATERIALS:

Samples of pioneer poetry, cowboy songs, and early expressions; writing, drawing materials

METHOD

Students will imagine themselves to be early settlers in the Great Basin (miners, ranchers, trappers, explorers, homesteaders, etc.) and write a poem or story about their "lives".

- 1) Ask the students to close their eyes for a few minutes and imagine what it would have been like to be one of the early settlers. You can guide their imagery by reading pioneer poetry, excerpts from actual pioneer diaries (related to the early pioneer settlement of the Great Basin), leave them on their own, or use ideas such as: "Imagine crossing the Great Basin, on foot, on horseback or by wagon, looking for water, shelter, and food. Imagine being a miner and searching for gold. Imagine homesteading and creating a farm out in the desert. Imagine yourself to be a rancher raising cattle."
- 2) Have students draw pictures to describe "their pioneer lives" as they imagined them. Have them write a poem or a short story. Poems can be free verse or rhyming; stories might begin with, "The first day I arrived in the Great Basin, I..."
- 3) Encourage students to share their poems and stories with the class. Put the stories, poems, and drawings in a class book about the western movement. Share the book with other classes.

EXTENSION:

Research early routes that the settlers followed coming west. Have the students draw maps to go with their stories or poems, describing the possible route they may have taken in their story or poem.

WATER CONFLICTS



SUBJECTS:

Drama, social studies

LOCATION:

Classroom

DURATION:

4 or 5 class periods

OBJECTIVE:

Describe circumstances in which interests may conflict in land and water rights. Evaluate points of view which may arise under such circumstances.

BACKGROUND:

In the early 20th century, there were many conflicts between ranchers and homesteaders, particularly over water rights. The main purpose of this exercise is to provide students with the opportunity to look at various points of view in a land use issue.

KEY VOCABULARY:

Water use, water rights

MATERIALS:

A room arranged as a courtroom

METHOD:

- 1) Set up a role-playing situation in which students become: cattle ranchers, homesteaders, jury members (12), a judge, 2 lawyers, witnesses (use as many as needed identify characters and perspectives which would be useful).
- 2) Provide students with background information: the year is 1910. The cattle companies have had exclusive use of water and land for the last fifteen years. The companies' claims are now up for renewal. The United States government has set aside parcels of land for the homesteaders adjacent to the cattle ranches, and more people are beginning to move into the area. The homesteaders need water for irrigating their crops and for personal use. However, the springs used by the ranches are the sole water sources. Wells on the homesteaders' land have not provided enough water. A conflict over water rights has arisen. (Ask students to describe any similar situations they may know about.)
- 3) Provide time (a few days to a week) for students to research their positions and develop their cases. During this time, ranchers and homesteaders will prepare their testimony; the judge and jury will prepare to hear the case (plan procedures); lawyers and witnesses will also prepare.
- **4)** After the testimony has been given and an opportunity for rebuttal provided, the jury should meet briefly to reach a decision. After meeting, the jury will report their decision, explaining the reasons for their decision.
- 5) Ask the students to discuss the results. What were the issues involved? What arguments support each side? Which arguments, if any, seem most persuasive? Which do not and why? What additional information, if any, would have been helpful to have in reaching a decision in this situation? How and where would we get the information, if we need it?

EXTENSION:

Have the students research any local conflicts regarding water and mineral rights and other land use issues. Select students to present varying points of view. Follow these issues with newspaper articles posted on a classroom bulletin board.

WAY BACK THEN



SUBJECTS:

Language arts, social studies

LOCATION:

Classroom

DURATION:

45 minutes

OBJECTIVE:

Name two activities people did in the 1800s that are still done today and two that are no longer practiced by most people.

MATERIALS:

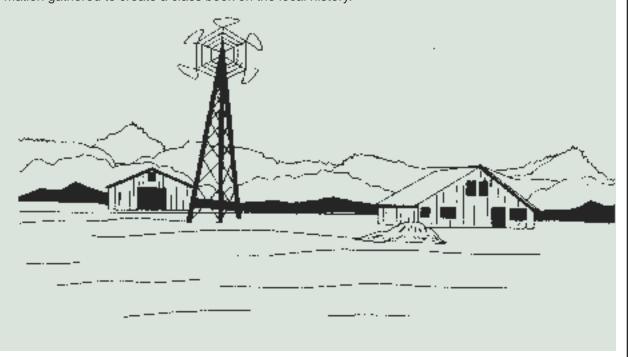
Activity pages (see following pages). Make enough copies for entire class.

METHOD:

- 1) Hand out the activity page, go over the directions, and have students complete it at home.
- 2) When the activity page is completed, discuss the results with the students. How old were the oldest people they talked with? Can they think of other activities they've done that people did "way back then"?

EXTENSION:

Have students interview older people they know who have lived in the community a long time. Help prepare questions to ask. The interviews could be done by small groups of students. Students may want to tape record them. Select some of the old-timers to come to talk to the class. Use the information gathered to create a class book on the local history.





WAY BACK THEN

This is a list of some of the activities people did in the 1800s and early 1900s How many have you done? What about your parents? How about one of the oldest people you know?

HAVE YOU EVER:	YOU	YOUR PARENTS	OLDER PERSON
Carried firewood?			
Cut wood with a handsaw?			
Washed all your dirty clothes by hand?			
Fed chickens?			
Ground corn for cornbread?			
Baked bread?			
Churned butter?			
Milked a cow by hand?			
Raised a vegetable garden?			
Picked and eaten wild greens?			
Ridden a horse?			
Ridden in a horse- drawn wagon?			
Seen a field plowed by a horse drawn plow			
Dyed yarn with plant dyes?			
Spun wool?			
Tracked an animal?			
Gone fishing?			
Cooked over a wood stove?			
Drawn water from a hand well?			





This is a list of some of the activities people did in the 1800s and early 1900s How many have you done? What about your parents? How about one of the oldest people you know?

HAVE YOU EVER:	YOU	YOUR PARENTS	OLDER PERSON
Dug a fence post?			
Panned for gold?			
Read a book by gas light?			
Lived in a house with no electricity?			
Used an outhouse?			

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